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Docket No.: 4266-0123PUS1  
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:  
Engelbert ECKER et al.

Application No.: 10/583,963

Confirmation No.: 1540

Filed: June 21, 2006

Art Unit: 1746

For: METHOD AND ARRANGEMENT FOR THE  
ENERGY-SAVING OPERATION OF  
DISHWASHERS

Examiner: Not Yet Assigned

**LETTER SUBMITTING ENGLISH TRANSLATION OF INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

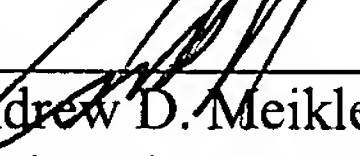
Sir:

Subsequent to the filing of the above-identified application on June 21, 2006, attached hereto is an English translation of the International Preliminary Report on Patentability (Form PCT/IPEA/409) that should be made of record in the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or to credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Dated: JUN 27 2007

Respectfully submitted,

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# PCT

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input checked="" type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2005/009189

Box No. I

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-21 \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* 1-18 \_\_\_\_\_ received by this Authority on 31.01.2006 with letter
- nos.\* \_\_\_\_\_ received by this Authority on of 31.01.2006
- ☒ the drawings:
- sheets 1/4-4/4 \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2005/009189

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	1-18	YES
	Claims		NO
Inventive step (IS)	Claims	1-18	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-18	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

This report makes reference to the following documents:

D1: US-A-4 561 904 (EBERHARDT, JR. ET AL) 31  
December 1985 (1985-12-31)  
D2: US-A-4 689 089 (EBERHARDT, JR. ET AL) 25  
August 1987 (1987-08-25)

D1 is regarded as the **prior art closest** to the subject matter of **claim 1** and **claim 10**. Known machines, such as the dishwashing and drying arrangement described in D1, typically have heaters (consumer elements) installed for the individual consumers, and therefore for the individual zones. These heaters are sufficient to cover each disadvantageous power consumption requirement. The heating capacity of the individual zones differs depending on the method used. Each of the installed heat capacities is controlled as a function of the current heat requirement. The sum of the individual heat capacities that are required for the rated capacity results in each maximum connected load.

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

Therefore, the **problem** to be solved by the present invention can be regarded as that of providing a method and an arrangement by means of which dishwashers can be operated in a more flexible and more energy-saving manner.

**Solution:** Using a method according to **claim 1** or a device according to **claim 10**, during a requirement determination step more power ( $p_{imax}$ ) can be supplied to certain heating elements in a start-up phase. Furthermore, the power level  $p_{ij}(B)$  is selected such that the sum of all of the power levels  $p_{ij}(B)$  totals at most the value  $p_{max}$ , and therefore it is not necessary to increase the connected load for the entire dishwasher as a function of the connected load of the known dishwasher.

Consequently, the subject matter of **claims 1 and 10** is novel within the meaning of PCT Article 33(2) and involves an inventive step within the meaning of PCT Article 33(3).

**Claims 2-9 and 11-16** are dependent on claims 1 and 10, respectively, and therefore likewise meet the PCT requirements for novelty and inventive step.

For the same reasons, **claims 17 and 18** likewise meet the PCT requirements for novelty and inventive step.

The claimed methods, devices and computer programs are industrially applicable in the field of multiple-tank dishwashers. Therefore, the

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2005/009189

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

requirements of PCT Article 33(4) have been met.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Contrary to the requirements of PCT Rule 5.1(a)(ii),  
the description neither cites document D1 nor  
indicates the relevant prior art disclosed therein.